

Appl. No. : 10/521,205
Filed : January 12, 2005

AMENDMENTS TO THE CLAIMS

Please amend the Claims 1, 8, and 10, as follows. Insertions are shown underlined while deletions are ~~struck through~~.

1 (currently amended): An optical fiber connection structure wherein optical fibers are connected by means of a component for connecting optical fibers comprising two plugs, into which at least one optical fiber has been inserted respectively, for aligning said optical fibers and connecting them, and an adapter for fixing said plugs one by one in a direction perpendicular to the axial direction of the optical fiber, wherein said plugs are each independently detachable from the adapter in a direction perpendicular to the axial direction of the optical fiber.

2 (original): The optical fiber connection structure according to Claim 1, wherein either the plug or the adapter is equipped with a latch member and the other has a latch engaging section(s), and the plug is fixed to the adapter by engaging the latch member with the latch engaging section.

3 (previously presented): The optical fiber connection structure according to Claim 1 or Claim 2, wherein either the plug or the adapter has a guide(s) for alignment and the other is equipped with a convex member for alignment which engages with said groove guide.

4 (previously presented): The optical fiber connection structure according to Claim 1, wherein the plug and the adapter have each a through-hole(s) for alignment, said through-hole being capable of being slidably inserted by a guide pin therein, and the plug is fixed to the adapter by inserting the guide pin through said through-hole of the adapter into said through-hole after the plug is attached to the adapter.

5 (previously presented): The optical fiber connection structure according to Claim 1, wherein the plug is equipped with one or plural ferrules, each ferrule of said plug is slidably equipped with a ferrule aligning member capable of sliding in a direction of the center axis of the optical fiber, and the ends of ferrules brought face to face with each other are located inside said ferrule aligning member as a result of sliding said ferrule aligning member in a direction of the center axis of the optical fibers after the plugs are attached to the adapter.

6 (original): The optical fiber connection structure according to Claim 5, wherein said ferrule aligning member is previously attached to the adapter.

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7 (original): The optical fiber connection structure according to Claim 5, wherein said ferrule aligning member is previously attached to a ferrule of at least one of two plugs.

8 (currently amended): A component for connecting optical fibers comprising two plugs, into which at least one optical fiber has been inserted respectively, for aligning said optical fibers and connecting them, and an upper open-type adapter to which said plugs are attached in a direction perpendicular to the axial direction of the optical fiber, said plugs being each independently detachable from the adapter in a direction perpendicular to the axial direction of the optical fiber, wherein either the plug or the adapter is equipped with a latch member and the other has a latch engaging section(s).

9 (original): The component for connecting optical fibers according to Claim 8, wherein either the plug or the adapter has a guide for alignment and the other is equipped with a member for alignment which engages with said guide.

10 (currently amended): A component for connecting optical fibers comprising two plugs, into which at least one optical fiber has been inserted respectively, for aligning said optical fibers and connecting them, and an adapter for fixing said plugs, wherein said plugs and adapter have a through-hole(s) for alignment, each through-hole being capable of being slidably inserted by a guide pin therein, and the guide pin is inserted through the through-hole of the adapter into said through-hole of the plug after the plug is attached to the adapter, and each plug is independently detachable from the adapter in a direction perpendicular to the axial direction of the optical fiber.

11 (previously presented): An optical fiber connecting method which comprises a step of inserting at least one optical fiber into two plugs, respectively, each plug having a slidable member which is capable of sliding with respect to the two plugs in an axial direction of the optical fiber, a step of attaching said two plugs to an adapter one by one in a direction perpendicular to the axial direction of the optical fiber, and a step of fixing said two plugs to the adapter by sliding each slidable member with respect to the two plugs in the axial direction of the optical fiber.

12 (previously presented): The optical fiber connecting method according to Claim 11, wherein the slidable member is a guide pin, and the two plugs and the adapter each have a through-hole(s) for alignment, wherein the guide pin is inserted in the through-hole of each plug, said step of sliding the slidable member comprising inserting another guide pin into the through-

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hole(s) in one edge of said adapter to forcefully push said guide pin already inserted in the plug, thereby fixing the opposed plugs to the adapter.

13 (original): The optical fiber connecting method according to Claim 12, wherein a fixing member provided with a guide pin(s) and being slidable to the adapter is used as a means for insertion of another guide pin into the through-hole(s) of the adapter and the adapter is mounted on the fixing member, which comprises sliding said fixing member in one direction so as to insert the guide pin into the through-hole of the adapter.

14 (original): The optical fiber connecting method according to Claim 11, wherein two plugs equipped each with a ferrule are used, which comprises a step of attaching slidably a ferrule aligning member to the ferrule of at least one of plugs, into which an optical fiber(s) is inserted, a step of attaching each plug to the adapter in a direction perpendicular to the center axis of optical fiber to fix the plugs to the adapter in such a state that the ferrules of the plugs oppose near to each other, and a step of sliding the ferrule aligning member in a direction of the center axis of the optical fiber so that the ends of the opposed ferrules are located inside said ferrule aligning member.

15 (original): The optical fiber connecting method according to Claim 11, wherein two plugs equipped each with a ferrule are used, which comprises a step of attaching one of two plugs, into which an optical fiber(s) is inserted, to an adapter equipped slidably with a ferrule aligning member in a direction perpendicular to the center axis of the optical fiber, and sliding said ferrule aligning member so as to attach to the ferrule, a step of attaching the other plug to the adapter in a direction perpendicular to the center axis of the optical fiber so that the ferrules oppose near to each other, and a step of sliding the ferrule aligning member in a direction of the center axis of the optical fiber so that the ends of opposed ferrules are located inside said ferrule aligning member.

16 (original): The optical fiber connecting method according to Claim 14 or Claim 15, wherein the plug is equipped with a plurality of ferrules.

17.(previously presented): An optical fiber connecting method which comprises the steps of:

inserting at least one optical fiber into two plugs, respectively;
placing a slidable member in at least one of the plugs, said slidable member being slidable along said one of the plugs in an axial direction of the optical fiber;

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attaching said two plugs to an adapter one by one in a direction perpendicular to the axial direction of the optical fiber so as to align each optical fiber of the respective two plugs; and

sliding the slideable member from said one of the plugs toward the other one of the plugs along the two plugs already attached to the adapter in the axial direction of the optical fiber so as to place the slideable member between the two plugs.